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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,383	12/27/2001	Christopher Pasqualino	I3311US02	8696

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CHICAGO, IL 60661

EXAMINER

YENKE, BRIAN P

ART UNIT	PAPER NUMBER
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2622

MAIL DATE	DELIVERY MODE
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11/21/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/034,383

Applicant(s)

PASQUALINO ET AL.

Examiner

BRIAN P. YENKE

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on RCE/Amendment (10/31/07).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-12, 15, 16, 18, 19, 22-24, 26 and 27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) all the above is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 31 October 2007 has been entered.

***Response to Arguments***

2. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3a. Claims 1, 2, and 5 are rejected under 35 U.S.C. 103(a) as being obvious over 1988 IBM Technical Disclosure #NN8812461 in view of Copeland et al., US 6,304,196 and XP-002202474 and Kim et al., US 6,954,491.

The IBM Technical disclosure describes an interface for

interfacing a controller/pc system and its CRT display. As described the interface includes circuitry for "encoding" video for transmission between the controller/pc system and its CRT display, wherein the interface includes:

- 1) A multiplexer for concatenating at least one data (e.g. that which represents horizontal sync, vertical sync, and/or the serial data channel signal/command data) the red, green, blue, and
- 2) A block code arrangement for balancing the entire multiplexed data stream, via the utilization only "balanced" codes, thereby eliminating low frequencies from the spectrum" while permitting 'AC coupling'.

Although, the concept of adding additional bits to an existing sequence/component in order to proper DC balance it was known to add additional bits to ensure proper DC balancing of the encoded signal for proper AC coupling the examiner nonetheless incorporates Copeland (see background/prior art discussion).

Therefore, it would have been clearly obvious to one of ordinary skill in the art at the time of the invention to modify the IBM disclosure which encodes video for transmission and permits AC coupling to add additional bits as done conventionally (Copeland discussion on Prior Art) for the advantages as noted above.

Regarding the newly amended concatenating audio data onto said at least one color component. As stated in the previous rejection IBM describes an interface which includes circuitry for "encoding" video for transmission between the controller/pc system and its CRT display. Thus although, IBM/Copeland does not explicitly recite "audio", the examiners position is that video/audio are conventionally transmitted/received together for display/listening.

The examiner will rely upon applicant's submitted XP-002202474, which evidences the concept of linking/concatenating the audio with video in a DVI link system.

Therefore it would have been obvious to one of ordinary skill in the art to modify IBM/Copeland which discloses a interfacing/system method between a controller/pc system and a CRT display by linking

the audio and video data (color component) together as done by XP-002202474 in order to provide the consumer the conventional ability to view and listen to desired programs.

Regarding the new amended "...during the blanking interval", although the above cited combination does not explicitly recite this feature, the examiner will evidence the concept of sending information including side channel information during the blanking period.

Kim discloses the concept of sending side-channel data during inactive data (blanking interval) over a high speed digital communication link (video link, DVI). It is also noted that captioning data also is conventionally transmitted during the blanking portion of a video signal. T

herefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination above, which discloses encoding video as stated above, by providing the audio data (side channel information) during the blanking interval as done conventionally to utilize the link's bandwidth during data blanking periods.

3b. Claims 3 and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461 in view of Copeland et al., US 6,304,196 and XP-002202474 and Kim et al., US 6,954,491.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display as was set forth above with respect the limitations of claim 1.

Claims 3 and 7-11 differ from the system described in the technical disclosure only in that said claims recite steps for correcting the video signal for erroneous pixels caused by transmission errors via various forms of pixel replacement (i.e. via replacement with a previously received correct value or a value obtained by the interpolation/averaging of surrounding correct pixel values);

Although it is conventional to have added overhead bits/data (e.g. such as CRC codes and/or hamming bits) to transmitted video data to detect and correct erroneous transmission errors; interpolation pixel values caused by wherein substitution and represent notoriously well known ways of generating replacement pixel values.

Copeland (col 4, line 1-20) discloses the use of CRC/checksum bits, therefore it would have been obvious to one of ordinary skill in the art to have modified the interface described in the IBM technical disclosure with such conventional overhead data to allow erroneous pixels to be replace using well known pixel replacement techniques performance immunity.

3c. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461 in view of Copeland et al., US 6,304,196 and XP-002202474 and Kim et al., US 6,954,491.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display as was set forth above with respect to the limitations of claim 1.

Claims 6 differs from the system described in the technical disclosure only that said claims specify said concatenated data as being "status" data/information.

The examiner maintains that would have been obvious to one of ordinary skill in the art to have used the "data channel" of the interface described in the IBM disclosure to carry any kind of auxiliary data that was conventionally associated with transmitted video data (i.e. be it sound or status information).

3d. Claims 12, 18, 21, 22, 23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461 in view of Copeland et al., US 6,304,196 and XP-002202474 and Kim et al., US 6,954,491.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display as was set forth above with respect to the limitations of claim 1.

The claims differ from the system described in the technical disclosure only in that the claim indicates that the data component to which at least one obtained by "splitting" component out from input data. The IBM disclosure does not specify the source of the red, green, blue, and intensity video component described concatenated therein.

The examiner takes Official Notice that it was notoriously well known in the art for the video that's transferred between a controller/PC and its CRT display to have been originated from a composite signal source thereby requiring the splitting" the video components prior to transmission. The examiner maintains that it would have been obvious to one of ordinary skill in the art to have utilized the interface described the IBM disclosure to have "split" and conveyed data from such conventional source as was known in the art.

Regarding the audio limitation/transmitting...see claim 1 above.

3e. Claims 15 and 16 are rejected under 35 U.S.C. 103 (a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461 in view of Copeland et al., US 6,304,196 and XP-002202474 and Kim et al., US 6,954,491.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display as was set forth above with respect to the limitations claim 12.

Claims 15 and 16 differ from the system described in the technical disclosure only in that said claims recite the addition of CRC codes to the transmission

Although it is conventional to have added overhead bits/data (e.g. such as CRC codes and/or hamming bits) to transmitted video data to detect and correct erroneous transmission errors; interpolation

pixel values caused by wherein substitution and represent notoriously well known ways of generating replacement pixel values.

The examiner relies upon Copeland (col 4, line 1-20) which discloses the use of CRC/checksum bits, therefore it would have been obvious to one of ordinary skill in the art to have modified the interface described in the IBM technical disclosure with such conventional overhead data to allow erroneous pixels to be replace using well known pixel replacement techniques performance immunity.

3f. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461 in view of Copeland et al., US 6,304,196 and XP-002202474 and Kim et al., US 6,954,491.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display as was set forth above with respect to the limitations claim 22.

Claim 24 differs from the system described in the technical disclosure only in that said claim recites the addition of CRC codes to the transmission;

Although it is conventional to have added overhead bits/data (e.g. such as CRC codes and/or hamming bits) to transmitted video data to detect and correct erroneous transmission errors; interpolation pixel values caused by wherein substitution and represent notoriously well known ways of generating replacement pixel values.

The examiner relies upon Copeland (col 4, line 1-20) which discloses the use of CRC/checksum bits, therefore it would have been obvious to one of ordinary skill in the art to have modified the interface described in the IBM technical disclosure with such conventional overhead data to allow erroneous pixels to be replace using well known pixel replacement techniques performance immunity.



3g. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461 in view of Copeland et al., US 6,304,196 and XP-002202474 and Kim et al., US 6,954,491.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its display as was set forth above with respect to the limitations of claim 12.

Claim 19 differs from the system described the technical disclosure only in that said claims specify said concatenated data as being "status" data/information.

The examiner maintains that it would have been obvious to one of ordinary skill in the art to have used the "data channel" the interface described the IBM disclosure to carry any kind of auxiliary data that was conventionally associated with transmitted video data (i.e. be it sound/audio or status information).

3h. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over 1988 IBM Technical Disclosure #NN8812461 and Kim et al., US 6,954,491.

The IBM Technical disclosure describes an interface for interfacing a controller/pc system and its CRT display as was set forth above with respect to the limitations of claim 22.

Claim 27 differs from the system described in the technical disclosure only in that said claims specify said concatenated data as being "status" data/information.

The examiner maintains that it would have been used the "data channel" of the interface described in the IBM disclosure to carry any kind of auxiliary data that was conventionally associated with transmitted video data (i.e. be it sound/audio or status information).

### ***Conclusion***

4. The applicant has included a European Search Report which includes citations as "X" references on the filed claims (including the above IBM Technical Disclosure and XP002202474 as used above. In

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addition WO-97/133348 was cited as an X reference and the examiner would like the applicant to clarify how the claims are patentable over this alleged X reference.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Yenke whose telephone number is (571)272-7359. The examiner's work schedule is Monday-Thursday, 0730-1830 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, David L. Ometz, can be reached at (571)272-7593.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

**(571)-273-8300**

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703)305-HELP.

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An automated message system is available 7 days a week, 24 hours a day providing informational responses to frequently asked questions and the ability to order certain documents. Customer service representatives are available to answer questions, send materials or connect customers with other offices of the USPTO from 8:30 a.m. - 8:00p.m. EST/EDT, Monday-Friday excluding federal holidays.

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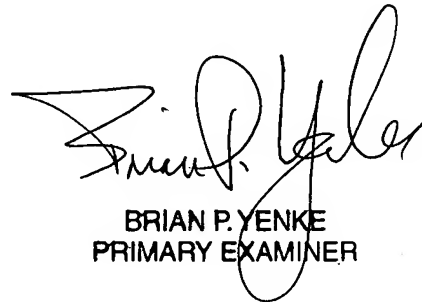
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For other technical patent information needs, the Patent Assistance Center can be reached through customer service representatives at the above numbers, Monday through Friday (except federal holidays) from 8:30 a.m. to 5:00 p.m. EST/EDT.

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B.P.Y  
19 November 2007



BRIAN P. YENKE  
PRIMARY EXAMINER